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Patent and Trademark Office**

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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. |
|-----------------|-------------|----------------------|---------------------|
| 09/141,289      | 08/27/98    | ROEHRIG              | J 8499-027-999      |

020583 LM32/0915  
PENNIE AND EDMONDS  
1155 AVENUE OF THE AMERICAS  
NEW YORK NY 10036-2711

EXAMINER

PATEL, J

ART UNIT

PAPER NUMBER

2723

DATE MAILED:

09/15/00

**Please find below and/or attached an Office communication concerning this application or proceeding.**

**Commissioner of Patents and Trademarks**

**NOTICE OF ALLOWANCE AND ISSUE FEE DUE**

020583  
 PENNIE AND EDMONDS  
 1155 AVENUE OF THE AMERICAS  
 NEW YORK, NY 10036-2711

LM32/0915

| APPLICATION NO.  | FILING DATE | TOTAL CLAIMS | EXAMINER AND GROUP ART UNIT | DATE MAILED   |
|--|-------------|--------------|-----------------------------|---------------|
| 097141,289   | 08/27/96    | 020          | PATEL, J                    | 2723 09/15/00 |
| First Named Applicant: ROENRIG, JIMMY R.   |             |              |                             |               |
| TITLE OF INVENTION: METHOD AND SYSTEM FOR DETECTION OF SUSPICIOUS LESIONS IN DIGITAL MAMMOGRAMS USING A COMBINATION OF SPICULATION AND DENSITY SIGNALS |             |              |                             |               |

| ATTY'S DOCKET NO. | CLASS-SUBCLASS | BATCH NO. | APPLN. TYPE | SMALL ENTITY | FEE DUE   | DATE DUE |
|-------------------|----------------|-----------|-------------|--------------|-----------|----------|
| 2 8498-027-999    | 382-130.000    | 525       | UTILITY     | NO           | \$1210.00 | 12/15/00 |

**THE APPLICATION IDENTIFIED ABOVE HAS BEEN EXAMINED AND IS ALLOWED FOR ISSUANCE AS A PATENT. PROSECUTION ON THE MERITS IS CLOSED.**

**THE ISSUE FEE MUST BE PAID WITHIN THREE MONTHS FROM THE MAILING DATE OF THIS NOTICE OR THIS APPLICATION SHALL BE REGARDED AS ABANDONED. THIS STATUTORY PERIOD CANNOT BE EXTENDED.**

**HOW TO RESPOND TO THIS NOTICE:****I. Review the SMALL ENTITY status shown above.**

If the SMALL ENTITY is shown as YES, verify your current SMALL ENTITY status:

- A. If the status is changed, pay twice the amount of the FEE DUE shown above and notify the Patent and Trademark Office of the change in status, or
- B. If the status is the same, pay the FEE DUE shown above.

If the SMALL ENTITY is shown as NO:

- A. Pay FEE DUE shown above, or
- B. File verified statement of Small Entity Status before, or with, payment of 1/2 the FEE DUE shown above.

**II. Part B-Issue Fee Transmittal should be completed and returned to the Patent and Trademark Office (PTO) with your ISSUE FEE. Even if the ISSUE FEE has already been paid by charge to deposit account, Part B Issue Fee Transmittal should be completed and returned. If you are charging the ISSUE FEE to your deposit account, section "4b" of Part B-Issue Fee Transmittal should be completed and an extra copy of the form should be submitted.**

**III. All communications regarding this application must give application number and batch number. Please direct all communications prior to issuance to Box ISSUE FEE unless advised to the contrary.**

**IMPORTANT REMINDER: Utility patents issuing on applications filed on or after Dec. 12, 1980 may require payment of maintenance fees. It is patentee's responsibility to ensure timely payment of maintenance fees when due.**

PATENT AND TRADEMARK OFFICE COPY

# Notice of Allowability

Application No.  
09/141,289

Applicant(s)  
JIMMY R. ROEHRIG et al.

Examiner  
Jay K. Patel

Group Art Unit  
2723



All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance and Issue Fee Due or other appropriate communication will be mailed in due course.

☒ This communication is responsive to response filed on July 5, 2000

☒ The allowed claim(s) is/are 1-20

☐ The drawings filed on \_\_\_\_\_ are acceptable.

☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).

☐ All ☐ Some\* ☒ None of the CERTIFIED copies of the priority documents have been

☐ received.

☐ received in Application No. (Series Code/Serial Number) \_\_\_\_\_

☐ received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\*Certified copies not received: \_\_\_\_\_

☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

A SHORTENED STATUTORY PERIOD FOR RESPONSE to comply with the requirements noted below is set to EXPIRE **THREE MONTHS** FROM THE "DATE MAILED" of this Office action. Failure to timely comply will result in ABANDONMENT of this application. Extensions of time may be obtained under the provisions of 37 CFR 1.136(a).

☐ Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL APPLICATION, PTO-152, which discloses that the oath or declaration is deficient. A SUBSTITUTE OATH OR DECLARATION IS REQUIRED.

☒ Applicant MUST submit NEW FORMAL DRAWINGS

☐ because the originally filed drawings were declared by applicant to be informal.

☒ including changes required by the Notice of Draftsperson's Patent Drawing Review, PTO-948, attached hereto or to Paper No. 5.

☐ including changes required by the proposed drawing correction filed on \_\_\_\_\_, which has been approved by the examiner.

☐ including changes required by the attached Examiner's Amendment/Comment.

Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the reverse side of the drawings. The drawings should be filed as a separate paper with a transmittal letter addressed to the Official Draftsperson.

☐ Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Any response to this letter should include, in the upper right hand corner, the APPLICATION NUMBER (SERIES CODE/SERIAL NUMBER). If applicant has received a Notice of Allowance and Issue Fee Due, the ISSUE BATCH NUMBER and DATE of the NOTICE OF ALLOWANCE should also be included.

## Attachment(s)

☐ Notice of References Cited, PTO-892

☒ Information Disclosure Statement(s), PTO-1449, Paper No(s). 6

☐ Notice of Draftsperson's Patent Drawing Review, PTO-948

☐ Notice of Informal Patent Application, PTO-152

☐ Interview Summary, PTO-413

☐ Examiner's Amendment/Comment

☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material

☒ Examiner's Statement of Reasons for Allowance

JAY K. PATEL  
PATENT EXAMINER  
ART UNIT 2723

Art Unit: 2723

***Response to Amendment***

1. As a result of the applicant's response filed July 5, 2000 (Paper # 9), claims 1-20 are now allowed.

***Reason For Allowance***

2. The closest prior art, Giger (US. 5,657,362) discloses an automated method and system for computerized detection of masses and parenchymal distortions in medical images of the mammograms comprising mass and spiculation detection. However, the closet prior art of Giger along with other prior art of records, fail to teach or suggest a system for detection of lesions in the digital mammogram wherein spiculation information are computed independent of computing mass information, as recited in independent method, apparatus and computer program product claims 1, 10 and 15 respectively, and in combination with the other elements of the claims. The instant application have provided extensive background in order to emphasize a need for a system that detects spiculated lesions in the mammogram which have no mass associated with them (specification, page 2, lines 26-37). All of the prior art system first detect suspicious mass and then analyze the suspicious mass to detect spiculation or any other abnormalities associated with the suspicious mass (specification, page 3, lines 25-35).


Art Unit: 2723


3. Claims 1-20 are allowed.
4. Any comments considered necessary by applicant must be submitted no later than the payment of the Issue Fee and, to avoid processing delays, should preferably **accompany** the Issue Fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

***Contact information***

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jay Patel whose telephone number is (703) 308-7728. The examiner can normally be reached on Monday through Friday from 8:30 a.m. to 5:00 p.m.

Any inquiry of a general nature or relating to the status of this application should be directed to the Group receptionist whose telephone number is (703) 305-3900. The facsimile phone number for this group is (703 ) 308-5397.

  
Jay Patel  
Patent Examiner  
Group Art Unit 2723

  
**JAY PATEL**  
**PATENT EXAMINER**

September 12, 2000